Weekly Summary Report
USEPA Oversight, Sauget Area 2, Sauget, IL
WA No. 224-RXBF-05XX / Contract No. 68-W6-0025

Week Ending Friday, October 1, 2004

This report summarizes the Interim Remedial Action (IRA) work conducted by Solutia and its contractors from September 25 through October 1, 2004 at Site R, Sauget Area 2. The current IRA fieldwork consists of site preparation and trench cleanout.

Contractors Onsite

Inquip Associates Inc. (barrier wall construction contractor)
PSI (geotechnical testing subcontractor)
Layne Western (contractor for well maintenance)
Aerotek (air monitoring subcontractor)
URS (primary consultant for Solutia)

Work Performed This Week

Work at the site predominantly consisted of excavating existing backfill and spoils from the trench in and around the location of a partial wedge that was previously missed during excavation. No backfill was placed into the open trench this week.

Excavation activities continued with the Liebherr 853 hydraulic clamshell during the week. By the end of the week, the open trench remained extended to approximately 1,243 feet in length.

Excavation activities were estimated to be approximately 100 percent complete by the end of the week, with backfill activities at approximately 76 percent complete.

Groundwater Migration Control System (GMCS)

The river elevation dropped during the week, lowering from 387.48 feet above mean sea level (amsl) on September 25, to 384.40 feet amsl on October 1. The combined flow rate of the extraction well system dropped from 2000 gallons per minute to approximately 1826 gallons per minute (gpm) due to pump problems with well EW3. The pump in EW3 was replaced on October 1, by Layne Western and during the replacement, wells EW1 and EW2 were turned off.

Eight piezometers, with four inside and four outside the barrier wall alignment, monitored the groundwater elevations adjacent to the barrier wall alignment during the week. Table 1 shows the river and piezometer water elevations measured on October 1, 2004 (10:00 AM). The barrier wall has been constructed adjacent to piezometer pairs P2, P3, and P4. In the vicinity of piezometer pair P1 (station 31+00), the trench has been excavated to total depth, with a portion of the trench backfilled and overlain with slurry.

Throughout the week, piezometer pair P1 maintained a gradient inward across the barrier wall with the piezometer located outside the barrier wall alignment approximately 2 to 3 feet

higher than the corresponding piezometer located inside the wall. Piezometer pair P2 started the reporting period (September 25), showing an inward gradient, however, by September 28 the gradient across the wall had reversed and the piezometer located inside recorded water levels higher than the corresponding piezometer located outside the barrier wall. The piezometers located outside the barrier wall alignment at pairs P3 and P4 showed water elevations between 1 and 4 feet lower than the corresponding piezometers located inside the barrier wall for the entire reporting period.

The river level during the early part of the week generally remained higher than the piezometers located on the inside of the barrier wall. However during the latter portion of the reporting period, after the river level had decreased, the river elevation was lower than the water elevations at piezometers on the inside of the barrier wall while remaining higher than piezometers located outside the barrier wall.

TABLE 1
River and Piezometer Water Elevations – October 1, 2004 (10:00)

	Elevation (ft above mean sea level)
River Level	384.40
Piezometer 1S – inside wall (northern-most pair)	381.89
Piezometer 1N – outside wall (northern-most pair)	384.38
Piezometer 2E – inside wall (north-central pair)	383.84
Piezometer 2W – outside wall (north-central pair)	382.42
Piezometer 3E – inside wall (south-central pair)	385.90
Piezometer 3W – outside wall (south-central pair)	382.63
Piezometer 4E – inside wall (southern-most pair)	386.36
Piezometer 4W – outside wall (southern-most pair)	384.57

Stormwater

No stormwater activity occurred during the week.

Barrier Wall Construction

Inquip continued excavation of the open trench along the barrier wall alignment, removing the remaining panels and wedges. The trench excavation that remains open extends from station 25+10 to station 37+93, approximately 1,283 feet in length.

The Liebherr 853 hydraulic clamshell excavated on four days during the week, and performed trench clean out on four days. The Liebherr 855 mechanical clamshell is still onsite outside the exclusion zone waiting to be demobilized. The Koehring 1266 trackhoe is also still onsite and is awaiting demobilization.

During the week, the depth of the open trench was measured daily. Table 2 summarizes the trench profile that was measured on October 1. On Graph 1, the current trench profile is depicted in comparison with the trench profile measured on September 24. Graph 2 shows the overall progress of the barrier wall construction.

Slurry

Approximately 48 tons of bentonite gel were used to mix fresh slurry on five days during the week. Fresh slurry, when pumped from the holding pond to the northern open trench segment near station 31+20, was tested frequently to assess its viscosity and adjusted with a blending pump using water from the fire hydrant, as necessary. The viscosity of the slurry was measured using a Marsh funnel, with results generally meeting the specification.

Slurry samples were collected from the top and the bottom of the trench daily and were tested for viscosity, density (unit weight), filtrate loss, pH and sand content. Analysis of trench slurry samples from the trench segment either met the specifications or satisfied the quality targets.

Spoils Handling

During the week, spoils were transferred from locations adjacent to the open trench or from the temporary stockpile on top of the landfill to the backfill mix pad near station 26+00.

Backfill and Trench Cleaning

No backfill activities occurred this week due to the excavation of existing backfill materials to create a 1:1 slope from the remaining partial wedge or obstruction at station 32+70, to where backfill daylights to ground surface. The obstruction at station 32+70 was discovered late last week and consists of a partial wedge that was not fully excavated, and is beneath the location of a concrete-encased utility corridor.

The obstruction was completely removed and then two methods were used to demonstrate that the trench was free of obstructions. The first test involved lowering the open clamshell bucket to depth underneath the utility at a slow controlled rate while monitoring the cable suspending the clamshell for deflection. The second test involved lowering a 16-foot steel beam suspended from a crane cable with a measuring tape attached to one end of the beam to monitor if the end of the beam and center of the beam were at the same depth. The two tests were administered on both the east and west sides of the utility corridor. Neither test encountered obstruction and the soundings by both tests showed less than a 1 foot difference in elevation.

After successfully removing the obstruction at station 32+70 the 853 hydraulic clamshell excavated to depth from station 32+70 to the previous toe of backfill at station 34+60 to remove previously placed backfill material and any portion of the obstruction that may have settled onto the backfill during the excavation of the obstruction.

Tests on the backfill mixture to be conducted offsite by Mueser-Rutledge and PSI's labs included permeability and gradation. Nineteen offsite gradation results from samples taken from 8/13/04 to 9/20/04 were reviewed. Seven out of the nineteen samples collected mid August through mid September, analyzed by the PSI offsite laboratory, revealed suspect gradation results. Using the splits of these samples held on site, additional gradation tests were performed on these samples, with analysis performed in total by two separate labs. The results from the two labs other than PSI, concurred that the samples passed the gradation analysis. Eight permeability tests were also reviewed this week and all met or exceeded site specifications by one order of magnitude.

Other Activities

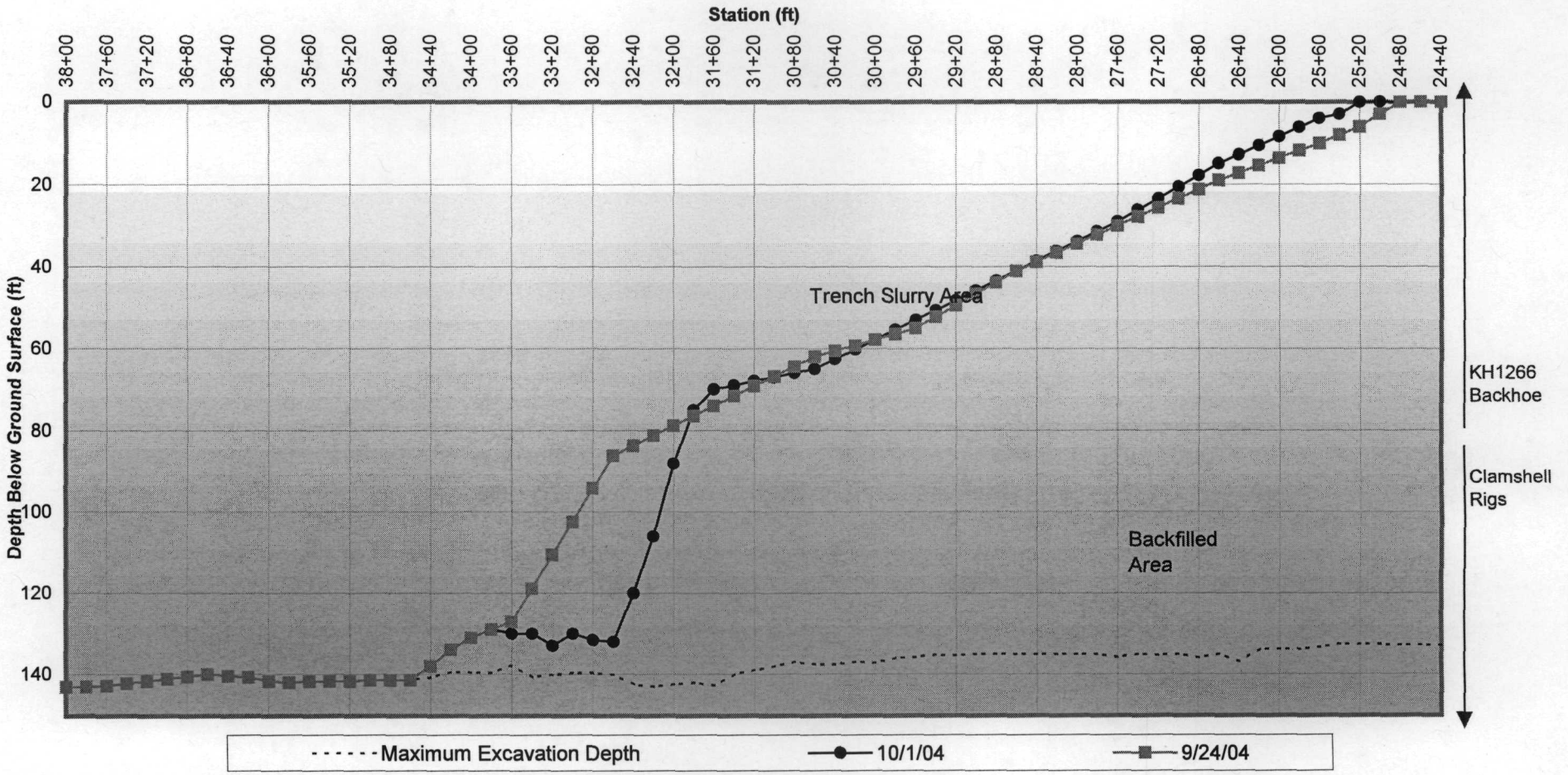
Aerotek performed the routine air monitoring conducted at Site R on four days of the week.

Layne Western was onsite on one day during the week replacing the faulty pump at extraction well EW3.

TABLE 2
Trench Profile (Downrigger Measurements) for the Barrier Wall Trench –October 1, 2004 7:00(AM)

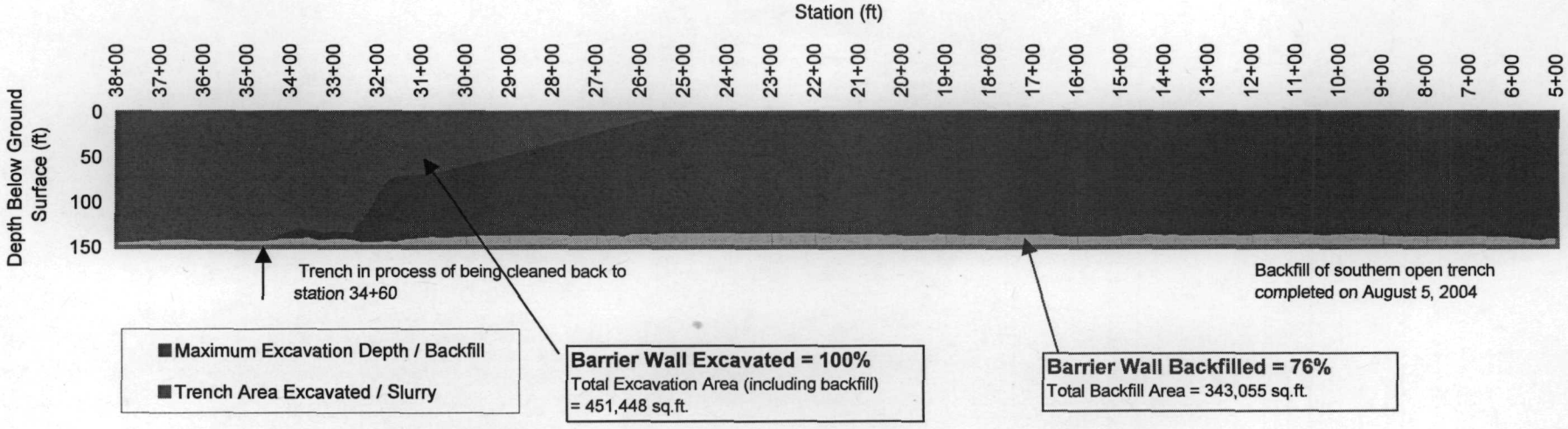
Station ID	Depth to bottom (ft below ground surface)
25+50	3
25+70	4
26+70	15
27+70	29
28+70	41
29+70	53
30+70	65
31+70	70
31+90	71
32+10	88
32+30	106
32+50	120
32+68	131
32+73	133
32+90	131
33+10	130
33+30	133
33+50	130
33+70	123
34+70	144
35+70	144
36+70	142
37+70	144
37+93	144

Graph 1 - Weekly Barrier Wall Construction Progress - Open Trench Segment
September 24 through October 1, 2004



Note: Data plotted for the week through measurements on 9/24/04 and 10/1/04.
Some data points are interpolated between the available data points where trench depths were read.

Graph 2 - Barrier Wall Construction Progress by October 1, 2004 (PM)



Note: Data plotted for the week through AM measurements on 10/1/04